## REMARKS

This Application has been carefully reviewed in light of the Office Action mailed May 17, 2005. At the time of the Office Action, Claims 1-24 were pending in this Application. Claims 1-13 were rejected.

**Election/Restriction Requirement**

In the Office Action mailed May 17, 2005, the Examiner set forth an election restriction requirement of the claimed inventions between Claims 1-13, drawn to a method determining the amount of nitrogen in a gas mixture; Claims 14-15, drawn to method of reforming a gas mixture to produce ammonia; Claims 16-20, drawn to detecting the amount of triatomic molecular nitrogen ion; and Claims 21-24, drawn to optical detection of nitrogen. During a telephone conversation with Examiner on April 25, 2005, Applicants made a provisional election to prosecute Claims 1-13. Applicants hereby confirm that election. Accordingly, Applicants hereby cancel Claims 14-24 without prejudice or disclaimer and elect that the cancelled claims are subject to the filing of a divisional application.

**Rejections under 35 U.S.C. § 112**

Claims 1-13 were rejected by the Examiner under 35 U.S.C. §112, second paragraph, as being indefinite and failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended Claims 1 to overcome these rejections.

**Rejections under 35 U.S.C. § 102**

Claims 1-3, 7, 12, and 13 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 2,894,821 issued to E.W. Jordan et al. ("Jordan et al."). Applicants respectfully traverse and submit the cited art does not teach all of the elements of the claimed embodiment of the invention.

Jordan is directed to ammonia synthesis, and to a method of controlling nitrogen content of a feed gas.

Jordan does not teach or suggest that the amount of nitrogen in a gas mixture can be inferred by measuring ammonia. There is no teaching or suggestion of using infrared detection to measure ammonia.

There is no motivation for such measurement because the amount of nitrogen (as a ratio) is already known. In fact, Jordan teaches away from measuring nitrogen by measuring ammonia content, because the object of the invention is to control nitrogen input, not to measure an unknown amount in a gas mixture.

**Rejections under 35 U.S.C. §103**

Claims 4, 5, 6, and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jordan et al. in view of U.S. Patent 5,711,147 issued to George E. Vogtlin et al. ("Vogtlin"). Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, does not render the claimed embodiment of the invention obvious.

Neither Jordan nor Vogtlin are directed to producing and measuring ammonia to infer the amount of nitrogen in a gas mixture. Both are merely directed to different applications of producing ammonia. Their contribution to the invention of Claim 1 adds to nothing more than that nitrogen and hydrogen are components of ammonia, and that ammonia can be produced using a plasma reactor.

Neither of the cited references teach or suggest that the amount of nitrogen in a gas mixture can be determined by first reforming constituents of the gas mixture into ammonia.

Claims 8-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jordan et al. in view of U.S. Patent 4,390,785 issued to Mark E. Faulhaber et al. ("Faulhaber").

Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, does not render the claimed embodiment of the invention obvious.

Faulhaber is directed to using infrared to measure certain gases. Faulhaber does not teach or suggest that nitrogen in a gas mixture can be reformed to ammonia as recited in Claim 1. Nor does the combination of Jordan and Faulhaber teach or suggest the invention of Claim 1. There is no motivation in either reference to measure nitrogen in a gas mixture of unknown composition. In Jordan, the nitrogen is known and controlled. In Faulhaber, ammonia is may be measured by infrared detection, but not as a product of nitrogen.

## CONCLUSION

Applicants have now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicants respectfully request reconsideration of the claims as amended.

Applicants enclose a Petition for Two Month Extension of Time, and authorize the Commissioner to charge the extension fee of $225.00 to Deposit Account No. 50-2148 of Baker Botts L.L.P. The Commissioner is hereby authorized to charge any further fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2634.

Respectfully submitted,
BAKER BOTTS L.L.P.
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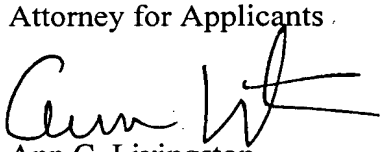

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